

AD-A058 988

SMITHSONIAN INSTITUTION WASHINGTON D C

ASSESSMENT OF ATTITUDES AND OPINIONS. REPORT OF A CONFERENCE HE--ETC(U)

JUL 78 H W SINAIKO, N D GLASSMAN

TR-7

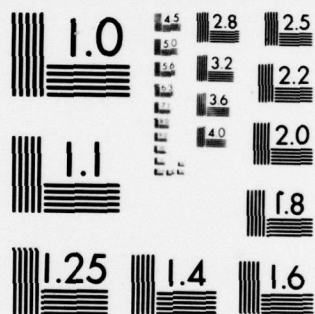
N00014-75-C-0550

NL

UNCLASSIFIED

[OF]
AD
A058988

END
DATE
FILMED
11-78
DDC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD A0 58988

DDC FILE COPY

12
B.S.

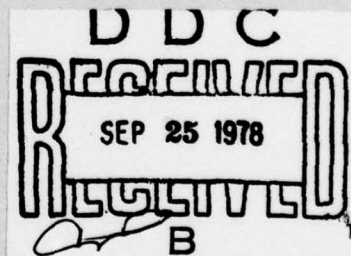
LEVEL II

ASSESSMENT OF ATTITUDES AND OPINIONS

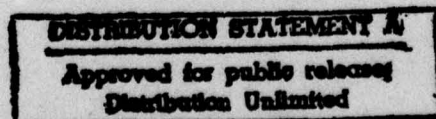
H. Wallace Sinaiko
Smithsonian Institution

Neal D. Glassman
Office of Naval Research

July 1978



Manpower Research and Advisory Services



This report was prepared under the Navy Manpower R&D Program of the
Office of Naval Research under Contract N00014-75-C-0550.

78 08 11 018

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER TR-7	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Assessment of Attitudes and Opinions - Report of a Conference		5. TYPE OF REPORT & PERIOD COVERED Technical Report
		6. PERFORMING ORG. REPORT NUMBER TR-7
7. AUTHOR(s) H. Wallace Sinaiko Neal D. Glassman		8. CONTRACT OR GRANT NUMBER(s) N00014-75-C-0550 ✓
9. PERFORMING ORGANIZATION NAME AND ADDRESS Smithsonian Institution Washington, DC 20560		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-032
11. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research U.S. Department of the Navy Arlington, Virginia 22217		12. REPORT DATE July 1978
14. MONITORING AGENCY NAME & ADDRESS (If different from Controlling Office)		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) attitude surveys survey methodology research on survey methods archival data anthropological methods revealed preference approach consumer panels secondary data analysis general vs. specific attitudes survey validity attitudes towards women		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) ✓ During February 16-17, 1978, the Office of Naval Research sponsored a conference on the assessment of attitudes and opinions. The purpose of the meeting was to look into innovative methods for assessing attitudes; several technical disciplines were represented, e.g., economics, social psychology, and cultural anthropology. A secondary purpose dealt with defining research questions on matters related to attitude measurement. In addition to formal papers, there were workshops to consider survey needs in four areas: utilization of military		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-014-6601

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Block 20 continued:

women, unionization, family services, and work incentives and productivity. The keynote speaker, the Principal Deputy Assistant Secretary of the Navy for Manpower, discussed the value of survey-based data for manpower decision making.

ACCESSION for		
NTIS	White Section	<input checked="" type="checkbox"/>
DDC	Buff Section	<input type="checkbox"/>
UNANNOUNCED		<input type="checkbox"/>
JUSTIFICATION		
BY		
DISTRIBUTION/AVAILABILITY CODES		
Dist.	AvAIL. and/or	SPECIAL
A		

S/N 0102- LF- 014- 6601

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

⑥
ASSESSMENT OF ATTITUDES AND OPINIONS.

Report of a conference
held at
Annapolis, Maryland
ON
February 16-17, 1978.

⑨ Technical rept.,

⑩ H. Wallace / Sinaiko, Neal D. / Glassman

H. Wallace Sinaiko
Manpower Research and Advisory Services
Smithsonian Institution

Neal D. Glassman
Mathematical and Information Sciences Division
Office of Naval Research

⑪ Jul 1978

⑫ 19p.

⑭ TR-71

This report was prepared under the Navy Manpower R&D Program of
the Office of Naval Research under Contract N00014-75-C-0550

⑮
Approved for public release; distribution unlimited. Reproduction
in whole or in part is permitted for any purpose of the United
States Government.

325 300

JOB

ACKNOWLEDGEMENTS

The conference summarized here was organized by a subcommittee of the Manpower R&D Planning Committee of the Office of Naval Research. Members of the subcommittee were: Dr. Richard Elster, Bureau of Naval Personnel; Dr. Carson Eoyang, Naval Postgraduate School; and CDR H. H. McKinley, Jr., Bureau of Naval Personnel. Their help in planning the meeting is gratefully acknowledged.

We also wish to thank Carol Blair, Smithsonian Institution, who prepared the manuscript; LaRue Gray, Office of Naval Research, who provided secretarial support; and Becky Graham, also of the Smithsonian, who had administrative and editorial responsibility for the entire enterprise.

H. Wallace Sinaiko

Neal D. Glassman

TABLE OF CONTENTS

BACKGROUND	1
THE MEETING	1
Keynote Address: A Manpower Policy Maker's Views	1
Professional Perspectives	3
Economics	
Cultural anthropology	
Social psychology	
Military intelligence	
Sociology	
Critical Review of a Survey-Based Study	4
Working Groups	5
Unionization	
Family services	
Work incentives and productivity	
Utilization of military women	
CANDIDATES FOR RESEARCH SUPPORT	8
Better Understanding of Current Survey Approaches	8
Methods for Assessing Attitudes	8
Observing vs. surveying: A "bake-off"	
Faster extraction techniques	
Retrospective pre-testing	
Exploitation of archival data	
Base-line or longitudinal information about attitudes	
Better quality data on attitudes	
Use of consumer panels	
Creation of a special data bank of expert consultants	
Use of synthetic or simulated organizations to probe expectancies, values, and attitudes	
Validity studies of attitude scales	

78 08 11 018

BACKGROUND

About three years ago the Navy Personnel R&D Center and the Office of Naval Research jointly sponsored a Conference on Survey Alternatives.* The meeting involved the presentation of technical papers commissioned for the occasion from representatives of a number of behavioral science disciplines. Subsequent to that conference the ONR Manpower R&D Planning Committee established, in 1977, subcommittees to look into research opportunities in each of several areas. One of these had to do with survey technology. The subcommittee dealing with this area elected to organize a two-day seminar as a way of: a) providing up-dated state-of-the-art information, and b) examining particular applications in naval and Marine Corps settings—an approach that was not taken in the 1975 meeting. This report is a summary of the February 1978 seminar.

THE MEETING

The seminar was held during February 16-17, 1978. Its main purpose was to examine innovative methods used by several disciplines in their approaches to assessing attitudes. Secondly, the seminar sought to identify technical issues that could become candidates for R&D support by ONR. There was an underlying assumption that there is a continuing need to improve the ways we can come to understand navymen's attitudes because of their importance to the manpower policy-making process. The meeting was primarily an internal planning activity for the ONR manpower program.

The seminar had three types of sessions: invited speakers, a critical review of a particular survey that had been done for the Navy, and working groups. None of the speakers was asked to prepare a formal statement; this report is a summary based on notes taken at the meeting.

Names of the approximately fifty attendees appear as the first section of the distribution list for this report.

Keynote Address: A Manpower Policy Maker's Views

The keynote speaker was Dr. Bernard Rostker, Principal Deputy Assistant Secretary of the Navy (Manpower and Reserve Affairs). In his introductory remarks he commented on his dual role in the seminar, i.e., as a manpower policy maker and as an economist with research experience

*See Sinaiko, H. W., and Broedling, L. A. (Eds.), Perspectives on Attitude Assessment: Surveys and their Alternatives. Champaign, Illinois: Pendleton Publications, 1976.

at the Rand Corporation. In the latter capacity, he said, he had made extensive use of factual or microeconomic data from such sources as the Current Population Survey, the Income Dynamics Survey, and the Census.

Rostker went on to emphasize the value of surveys in generating data necessary to assess the impact of policy alternatives. He underscored, however, the distinction between "factual" data, on the one hand, and "attitudes and opinions" on the other; and he raised questions about the usefulness of the latter as input to the decision process. Referring to McGuire,* Rostker argued that attitudes are, at best, only tenuously related to behavior. He said that as an economist he subscribed to the point of view described by McGuire as "operationalist"—i.e., that what people do in response to economic change is more significant than what they say they will do. Econometrics estimates the relationships between the environment (i.e., prices or income) and behavior (i.e., purchases or hours worked). Rostker added that the concept of elasticity is the economist's way of expressing those relationships, i.e., as the percentage change in behavior divided by the percentage change in an economic state. He said that the concept of elasticity is a direct measure and leaves little room for intervening factors such as attitudes.

Rostker pointed out that most decision makers are, in McGuire's terms, operationalists. While they may be concerned about attitudes, what really counts is behavior. They are interested in policies and programs which actually change behavior. For example, if a given program changes attitudes but does not affect behavior it is unlikely to gain long term support.

Parenthetically Rostker said that decision makers sometimes find it necessary to "take an attitudinal reading" of their organizations. When they do this, however, they are likely to seek the views of selected individuals whom they know and trust rather than rely on more formal surveying. One reason for this approach, Rostker said, is that "... the gap between the research community and decision makers is unfortunately large."

In distinguishing between general and specific attitudes, Rostker went on to describe a potential need for information on how Navy people would behave if certain proposed changes in the military retirement system were made. He said that it would be possible to approach the problem in three ways: a) a careful examination of existing data to develop appropriate analogies and extrapolations; b) an experiment; c) a survey which inquired about how people would act under the new system. Rostker argued that such a survey would be substantially different from an inquiry about general attitudes toward the Navy, and he said it would be of value to him as a decision maker.

Rostker made two closing comments. First he said that the proper question to be asked by the seminar would not deal with alternatives to surveys but rather with the circumstances in which survey methodology is an appropriate way to predict behavioral responses. Second, he said that

*McGuire, W. J., "The concepts of attitudes and their relations to behaviors," in Sinaiko and Broedling (Eds.), Op. cit.

the seminar should also question the utility of general attitude assessment.

Professional Perspectives

Economics. Dr. David Whipple is an economist at the Naval Post-graduate School. He said that economists generally depend upon either (1) a "revealed preference" approach to understanding individual behavior: i.e., individuals' actual behavior, say, as consumers, is observed, then hypotheses are drawn from those observations; or (2) "a priori" assumptions about the nature of the preferences which generate behavior: i.e., such assumptions are made and derived hypotheses are tested. Regarding the role of survey research, Whipple asserted that: a) economists are skeptical about the value of surveys which ask individuals to recall their past behavior or predict what they will do in the future without internally consistent incentives; b) recent research indicates that true preferences (e.g., about public goods and services) may be revealed through incentive-consistent surveys which ask respondents to estimate the "price" they would be willing to pay for a situation not to come into being; c) controlled experimentation, though expensive, can be a cost-effective way to assess public policy; d) innovative survey research methods in conjunction with analytical research would be useful in helping to verify economists' assumptions about economic behavior and have a definite role to play in public policy formation and implementation. The major caveat expressed by Whipple was that the automatic tendency to survey in situations associated with past or future behavior or decisions must be resisted.

Cultural anthropology. Drs. Sabra Woolley and James Downs, both anthropologists currently working in the Bureau of Naval Personnel, described anthropological methods used to understand behavior and determine attitudes: a) behavior is assumed to be learned and non-random, and it can be predicted; b) anthropology looks at a full range of behavior, e.g., economic, political, and social, as a total system; c) cross-cultural comparisons are a useful analytic technique, as are historical studies of how people behaved in the past; d) participant-observation, requiring the anthropologist to become deeply involved in the group he is studying over a considerable time, is a standard technique in which the observer becomes a "trained instrument"; e) survey questionnaires are "soft" because they reflect the biases of both the questioner and the respondent to an unknown extent; f) accidental or chance events and how people respond to them provide valuable insights into behavior; g) surveys are costly, and, dollar-for-dollar or hour-for-hour, the anthropologist can learn more about what people believe and think they need.

Social psychology. Dr. Lee Sechrest, professor of psychology at Florida State University, spoke about innovative measurement in the behavioral sciences; in particular he emphasized the value of devising new methods of analysis for traditionally obtained data. Here are his main points: a) new statistical analytic approaches, such as hierarchical regression analysis, are attractive but underused; b) conventional experimental designs frequently make it impossible to detect attitude (or other behavioral) shifts, and new designs are needed; c) policy

decisions are often based on spurious data; as a way of correcting this, experimental trials should be conducted; d) much more work is needed in measurement theory; e) there is a need for rapid and sensitive ways to measure the effects of policy change; f) measurement is often taken too seriously and there is a tendency for it to become an end in itself; g) archival data is a particularly useful but underexploited source of information. In conclusion Sechrest called for more attention to putting archival data in accessible form and for the development of more imaginative ways to use such records.

Military intelligence. COL Homer Schott, Defense Intelligence School, described methods used by military attachés in observing attitudes. In general the attaché depends on direct observation and conversational collection in situations that are typically of brief duration and subject to frequent interruption. Attachés are sensitized to observe evidence of deception, such as press censorship or the staging of events. In their training, attachés learn to make parsimonious interpretations of evidence. An important aspect of the attaché's work is the establishment of base line data over time so that change can be assessed more accurately.

Sociology. The usefulness and availability of extant data was discussed by Dr. Albert Biderman, Bureau of Applied Social Science Research, Inc. Using his current ONR-sponsored research on occupational inheritance to illustrate his points, Biderman was critical of the quality of data and of the models available to interpret it. He said he preferred to work with existing data rather than to have to collect new information. Biderman was optimistic about the development of improved analytic methods—i.e., they are faster, more precise, and lower in cost—and he said that this was a necessary trend because of increasing resistance to the collection of new data. Ad hoc efforts to obtain social or behavioral data for particular policy issues were seen as undesirable because they do not provide temporal scope. In order for secondary analysis of available data to be undertaken, Biderman argued, such data has to be institutionalized and collected on a regular basis. There is a strong need for methods that will make it possible to estimate the quality of data before an analysis is undertaken. (This point was echoed by other participants and, in particular, by ONR scientific officers, who said that many researchers discover deficiencies in data only after they have embarked on costly studies.)

Critical Review of a Survey-Based Study

Dr. Richard Morey, while at Control Analysis Corporation, had been principal investigator of an ONR-sponsored study on cost benefits of Navy recreation. He summarized the research methods, which included sample surveys dealing with navymen's attitudes and preferences about recreation and their views of its economic worth. These inputs were incorporated into an econometric model which determined the cost effectiveness of these benefits in terms of the increased training and recruiting cost to be incurred if the benefits were removed.

Dr. John Harper, GAO, questioned the validity of the survey's findings because, he said, they were based in part on the assumption that

attitudes or preferences are linked to behavior and research has shown that linkage to be very loose. He also questioned the survey's findings because the elasticity data for the econometric model was obtained in 1964-67, prior to the all-volunteer era, by methods which confounded pay—called a questionable proxy for recreation benefits—and other factors which might affect reenlistment. Harper argued that an experimental approach to recreational benefits or an analysis of archival data would have been more appropriate than Morey's econometric model and his sample surveys, which posed "what if" questions.

Other participants suggested the value of observing reactions of navymen who have been transferred between stations having very different recreation facilities. It was also pointed out that the alternatives posed by Dr. Harper and the other participants are accompanied by a number of problems of their own.

Working Groups

Working groups were organized around four themes or problem areas having to do with one or another aspect of military manpower: a) unionization; b) family services; c) work incentives and productivity; d) utilization of military women. Working group chairmen spoke briefly to the full seminar to outline their areas of interest. Then the groups met separately with the objective of determining how attitudinal information or other data could contribute to their understanding and to solutions. A summary session brought working groups' conclusions back to the seminar.

Unionization. LCDR John Terry, OASD(MRA&L), spoke about approaches to the understanding of unionization issues. He described the limitations of historical analysis and the reasons why European military union experiences are not generalizable to the U.S. Terry said that controlled experimentation could provide useful information; but, he added, it would not be a viable approach. An alternative is to consider as a quasi-experiment the fact that Army and Air Force civilian technicians are unionized and also serve as uniformed members of the Guard and Reserves. Another opportunity for observing the impact of unions on military operations is afforded by the manning of some naval replenishment ships by civilian crews. Terry cautioned about the use of surveys because they can, in bringing up the subject of unions, raise questions in the minds of military people who hadn't previously considered the possibility of becoming unionized. He cited surveys among Air Force personnel which showed that petty officers and middle-range commissioned officers, who tend to see unions as bad for military effectiveness and chain-of-command matters, at the same time believe that unions would benefit and protect individual members. Terry said that there was a need for much better data on attitudes and expectations about unions, and he felt that when such information was available it would be possible for the Defense Department to better deal with the issue. Although it was not related specifically to unionization, Terry suggested an indirect type of survey question: ask Navy people about what they think of their ships and their weapon systems with respect to the ability of those systems to perform military missions. He suggested that this might provide an indirect and

useful way of measuring attitudes about the Navy; such information could, in turn, cast light on the conditions that generate pressures leading to unionization.

Family services. CDR J. J. Kenny of the Navy Recruiting Command spoke about family service programs. He pointed out that while there are many separate activities intended to help Navy families, there is no umbrella organization with unified objectives, and the effectiveness of the separate programs is not known. Kenny also said that there is no established correlation between family-service availability and combat effectiveness, and he concluded that there is no sound basis for continuing to support family service activities. If these programs are to remain part of the Navy's personnel support system, new methods are needed to address the perceived needs of families and establish the cost effectiveness of the family service. Kenny also felt that it would be useful to study the desirable degree of intervention in family matters by the official Navy. Working group members cited survey-based research under ONR sponsorship at the System Development Corporation, which first established the importance of spouses' roles in the career decisions of navymen. In this regard members also cited the need for a theoretical approach to family service problems, and they suggested that it would be instructive to look at the Navy as a subculture in which the wives are a special subset. Members urged that a great deal of attention be paid to wives of men of the type the Navy would like to retain. There was no consensus, however, that we can yet describe those men. It was also suggested that extant files, e.g., those containing information about family problems among Polaris crew members, could provide useful insights and would not require new surveys. Working group members cautioned against being dependent on such indicators as the utilization of health services, on the grounds that utilization could reflect the availability of services rather than the existence of family stresses. There was also an expression of caution about dealing with statistics on the utilization of family services, on the grounds that it is very difficult to know what is causal and what is symptomatic.

Work incentives and productivity. The chairman of this working group, Dr. Delbert Nebeker (NPRDC), spoke about the design of incentives. He began his remarks by saying that he felt that the seminar provided an opportunity to explore alternatives that are sometimes ignored, i.e., a family of methods, such as cost vs. benefit tradeoffs, that will ultimately provide the basis for a theory of incentives. Incentive programs, Nebeker pointed out, tend to be based on expectancy theory: that is, individuals behave in accordance with what they anticipate to be the consequences of their behavior. He said in this regard that it would be necessary to learn to measure what Navy people value and don't value so that their expectancies can be defined. A pilot study at the Long Beach Naval Shipyard which monitored the work of office staff showed how an incentive system could result in a 75% increase in performance. Nebeker called for new ways to identify people's expectancies, i.e., what they value, what their belief systems are, and so on. It will also be necessary to develop ways to measure the effects of different organizational policies or actions on these values. In discussing their deliberations, members of

the working group pointed out that "incentives" and "rewards" mean different things to different people. They referred to conferred vs. earned rewards. An example of the latter is a quality step increase—which, although a one-time event, confers the reward permanently while the behavior that led to it doesn't have to be repeated. Contributing to the ineffectiveness of rewards are these facts: they are given too routinely, they result in a change in standards, or they are based on too short a period of observation. There was also some mention made of the potential value of rewarding groups instead of individuals; in this connection, Nebeker referred to the "zero sum" effect: only one person is rewarded and others, regardless of their good performance, are excluded. Nebeker said it would be useful to know what types of rewards would produce the greatest impact and how those rewards would be related to the Navy's investment in them. He urged the development of a methodology that would enable us to learn about Navy peoples' perceptions of the value of different types of rewards.

Utilization of military women. Dr. Kathleen Durning and Mrs. Patricia Thomas, both of NPRDC, discussed research on attitudes toward women in the Navy. Durning pointed out that surveys have been the major, if not the exclusive method used to measure attitudes. She said that the scales used tend to measure different things and that most of them—e.g., "Attitudes toward Feminist Issues," based on the platform of the National Organization of Women, and Spence's "Attitudes toward Women"—are of unknown validity. Durning said she has uncovered no research on the validity of these scales, but she has turned up correlational studies which purport to show relationships between scores and, for example, age, education, and sex. Durning pointed out that among the drawbacks to surveys research is reactivity, i.e., that questions raise other questions and may even create new problems. Durning enumerated a number of alternative approaches that might be used instead of standard questions and surveys. One of these was Sechrest's recommendation* for the use of "misinformation tests" to measure biases. She also urged the adoption of direct observational techniques and sociometric approaches. Durning called for quasi-experiments and field experiments of the type reported by Haggstrom,** and she suggested greater use of the in-basket procedure as a way of simulating personnel situations. Durning said that the current approach by NPRDC toward studying the utilization of women is a multi-method one including field studies, observational techniques, surveys, and a demographic analysis of extant data. There is also experimentation on the proportion of women in recruit training companies. Durning said that all methods being used in the NPRDC work tend to produce results that converge on the same answers or types of observations—which has the effect of reducing error that comes from depending on a single method.

*Sechrest, L., "Another look at unobtrusive measures: An alternative to what?" in Sinaiko and Broedling (Eds.), Op. cit.

**Haggstrom, G. W., "The pitfalls of manpower experimentation," in Sinaiko and Broedling (Eds.), Op. cit.

Thomas reported the discussion of the working group. She said it was the group's consensus that survey information isn't very useful because it tends to derive socially approved answers, though she added that open-ended questions often provide better information. Thomas said that because the situation is so fluid and because so many incidents in the Navy of bringing women to new jobs and new situations are first-time events, it may not be useful to even do any research until the novelty effects wear off. Thomas also said that an unspoken issue but one which concerns many policy people is the likelihood or impact of sexual behavior in mixed crews. She felt that there might be something to be learned from looking into mixed police and fire teams and at the employment of women in the Merchant Marine. Thomas said that the most fruitful approach would be multi-method, i.e., would employ time-series analysis, critical-incident collection, interviewing, observation, and other group techniques. She also referred to the technique of "conjoint analysis," which forces tradeoff decisions by individuals. Referring to naturally occurring experiments on the introduction of women to all-male crews, Thomas rejected the importance of the experiment with the U.S.S. Sanctuary because of the Navy's failure to make accurate and systematic observations. Thomas referred to the Army's recent experiment entitled MAXWACS, which varied the mix of women in Army companies, and she said that there were slight but not statistically significant differences favoring the performance of companies that had larger proportions of women in them. Thomas said that there remain a great many problems having to do with applying results of this type of research. One is that some officers don't know what leadership styles to use when there are women in their units. Thomas said that workshops and other techniques should be used to disseminate research findings and help both officers and petty officers modify their traditional leadership styles.

CANDIDATES FOR RESEARCH SUPPORT

Better Understanding of Current Survey Approaches

A taxonomy of Navy surveys would provide a starting point for research. How often do we conduct attitude surveys? What do we ask and why? What are the repeatedly or frequently sought items of information? Can alternative indicators of attitude be developed that would circumvent the need for surveys at all?

The administration of surveys in the Navy could be better understood. For example, has there been too much surveying? what is the evidence? What burden do surveys impose on respondents? on administrators? Is there a need for quality control in the field?

Methods for Assessing Attitudes

Observing vs. surveying: A "bake-off." Anthropologists claim that their observational methods produce better information about attitudes than do traditional sample surveys. On the other hand, the participant-observer approach is said to be slow and expensive. A modest experiment

in which surveyors and anthropologists sample the same population would provide evidence of the efficacies of the two approaches.

Faster extraction techniques. It is clear that anthropological observations take a long time to make and even longer to synthesize and report. Is it possible to develop ways to speed up these processes?

Retrospective pre-testing. In this approach, suggested by one speaker at the seminar, respondents are asked to respond as they might have before an intervention took place. Responses are then compared with indicators of current attitudes. We are recommending that the approach be tested in Navy settings as a way of determining its effectiveness as an attitude-measure surrogate. An example would be to examine the attitudes of navymen who, as a result of transfer, have been exposed to radically different recreation programs and policies.

Exploitation of archival data. It has been repeatedly pointed out that there are rich and unexploited sources of information capable of providing attitudinal information. Techniques should be developed for identifying these sources, for determining their availability, and for extracting and summarizing the information they contain. (An illustration is the corpus of "Letters to the Editor" of Navy Times.)

Base-line or longitudinal information about attitudes. Although there was no unanimity about its value, the sense of the seminar was that such data would be useful as a way to "take the pulse" of the Navy. Techniques should be developed to define the content of a longitudinal attitudinal data bank and to obtain that data at minimal cost. It might be possible to use survey-derived information from Navy-wide programs of the kind run by the Human Resources Management Centers.

Better quality data on attitudes. The complaint that data is incomplete or ambiguous led to the recommendation that methods be developed to enable a researcher to determine the quality of data before undertaking an analysis.

Use of consumer panels. This is a well-known technique which has been exploited by market researchers and labor economists. (An example of the latter is the monthly survey of 50,000 households by the BLS as a way of estimating the employment status of the nation.) Panels have several advantages, the main one being the relative speed with which surveys can be gotten into the field and responses received. We recommend the exploration of the panel technique in a Navy setting as a means of assessing attitudes. This work will call for special attention to administrative procedures, the building of representative panels, and the like.

Creation of a special data bank of expert consultants. This suggestion proposes a special file of technical experts representing such manpower-related areas as economics, social psychology, and anthropology. The file, coupled with off-the-shelf teleconferencing technology, would make it possible to convene small groups who could answer direct questions put to them by Navy manpower managers. The hard part of this recommenda-

tion would be the compilation of the file of experts, providing indoctrination to them and to the managers who might call on them, and organizing a system that would work with minimal practice or warm-up.

Use of synthetic or simulated organizations to probe expectancies, values, and attitudes. The technique is well known in social psychological circles; a good example is Zimbardo's synthetic prison experiment. We recommend that the method itself be subjected to test as a way of getting around the constraints of shipboard or Navy-wide surveys.

Validity studies of attitude scales. Particularly in new areas such as the utilization of women, it is necessary to conduct rigorous validation research on attitude scales that are coming into prominence. Several such scales were described at the seminar, and each was said to have unknown validity. It would be useful to work toward a limited number of scales that are widely used in the other Services and in non-military settings. Questions of the reactivity of the scales should also be addressed.

DISTRIBUTION LIST

Conference Attendees

CAPT G. B. Allen, USN
Human Resource Management Center
(Pearl Harbor)

Dr. Barbara Bailar
Bureau of the Census

Mr. Robert Banzhas
U.S. Army Recruiting Command

Dr. Albert D. Biderman
Bureau of Social Science Research, Inc.

Dr. David G. Bowers
Institute for Social Research

Dr. Glenn L. Bryan
Office of Naval Research (Code 450)

MAJ Donald Christy, USMC
Office of the Assistant Secretary of
the Navy (M,RA,&L)

Prof. Charles L. Cochran
U.S. Naval Academy

Dr. Charles E. Davis
Office of Naval Research, Chicago

Mr. Marvin Denicoff
Office of Naval Research (Code 437)

Dr. Zahava Doering
The Rand Corporation

YNCS J. F. Downs, USN
Bureau of Naval Personnel (Pers 621)

Dr. Kathleen P. Durning
Navy Personnel R&D Center

LT Karen Elliott, USN
Bureau of Naval Personnel (Pers 73)

Dr. Carson Eoyang
Naval Postgraduate School

CAPT A. T. Eyler
Bureau of Naval Personnel (Pers 62)

LT M. L. Finch, USN
Bureau of Naval Personnel (Pers 6211)

LCDR John C. Gawne
Human Resource Management Center
(Norfolk)

LCDR G. W. Gilluly, USN
Bureau of Naval Personnel (Pers 2122)

Dr. Neal D. Glassman
Office of Naval Research (Code 434)

Mr. Steven Gorman
Bureau of Naval Personnel (Pers 0r)

Mrs. Rebecca W. Graham
Smithsonian Institution

Dr. E. K. Eric Gunderson
Naval Health Research Center

CDR C. B. Gustafson, USN
Naval Postgraduate School

Dr. John Harper
U.S. General Accounting Office

Dr. P. R. Harrison
U.S. Naval Academy

Mr. Gene Hillman
U.S. Naval Academy

CDR William D. Hohman, USN
Bureau of Naval Personnel (Pers 625)

CDR Ronald E. James
Office of Naval Research

Ms. Donna Johnson
Army Survey Branch

CDR J. J. Kenny, USN
Navy Recruiting Command

CAPT R. L. Latta, USN
Human Resource Management Center
(Norfolk)

Mr. William Lindahl
Office of the Assistant Secretary of
the Navy (M,RA,&L)

CDR John M. Machesky
Bureau of Naval Personnel (Pers 726)

LT William Maynard, USN
U.S. Naval Academy

CDR H. H. McKinley, USN
Bureau of Naval Personnel (Pers 65)

Dr. Richard C. Morey
Duke University

Dr. John A. Nagay
Office of Naval Research (Code 452)

Dr. Delbert Nebeker
Navy Personnel R&D Center

Ms. Mary B. Nirmaier
Office of the Assistant Secretary of
Defense (Public Affairs)

LCOL William H. Osgood, USMC
HQ U.S. Marine Corps (MPI-20)

CDR Paul Rae
Human Resource Management Center
(Washington)

Dr. Bernard D. Rostker
Principal Deputy Assistant Secretary
of the Navy (M,RA,&L)

Mr. Kenneth C. Scheflen
Defense Manpower Data Center

COL Homer Schott
Defense Intelligence School

Prof. Lee Sechrest
Florida State University

Dr. G. Thomas Sicilia
Office of the Secretary of Defense
(M,RA,&L)

Dr. H. Wallace Sinaiko
Smithsonian Institution

Prof. F. A. Skove
U.S. Naval Academy

CDR Leroy Sommer, USN
Human Resource Management Center
(Washington)

LCDR John Terry
Office of the Assistant Secretary of
the Navy (M,RA,&L)

Mrs. Patricia J. Thomas
Navy Personnel R&D Center

CAPT David W. Timberlake, USN
Bureau of Naval Personnel (Pers 65)

Prof. David R. Whipple
Naval Postgraduate School

Dr. Sabra Woolley
Bureau of Naval Personnel (Pers 621)

CDR G. W. Yaeger, USN
Bureau of Naval Personnel

Others

Deputy and Chief Scientist
Office of Naval Research (Code 102)

Assistant Chief for Technology
Office of Naval Research (Code 200)

Assistant Chief for Contract Research
Programs
Office of Naval Research (Code 400)

Manager, Program in Manpower R&D - 9 copies
Office of Naval Research (Code 450)

Defense Documentation Center - 12 copies
Alexandria, Virginia

Psychologist
Office of Naval Research Branch Office
(Boston)

Psychologist
Office of Naval Research Branch Office
(Pasadena)

Manpower Analysis and Systems Development Branch Chief of Naval Operations (Op 121)	Director, Research and Data Assistant Secretary of Defense (M,RA,&L)
Manpower Training and Reserve Group Chief of Naval Operations (Op 964D)	Human Resource Research Organization Dr. Robert Vineberg
Assistant for Personnel Logistics Planning Chief of Naval Operations (Op 987)	University of Washington Prof. Irwin G. Sarason
Deputy Director, Program Division Chief of Naval Operations (Op 991B)	University of South Carolina Prof. William H. Mobley
Naval Personnel Support Technology Naval Material Command (08T244)	Tuskegee Institute Dr. Paul L. Wall
Technical Director - 5 copies Navy Personnel R&D Center	University City Science Center Dr. Faris Kirkland
Director NPRDC Washington Liaison Office	Urban Institute Dr. Richard S. Toikka
Scientific Advisor to the Chief of Naval Personnel (Pers Or) Bureau of Naval Personnel	Wharton Econometric Forecasting Associates Dr. Lawrence R. Klein
Special Assistant for Force Analysis Bureau of Naval Personnel (Pers 2X)	Information Spectrum, Inc. Dr. Les Cohen
Assistant Deputy Chief for Retention Analysis and Coordination Bureau of Naval Personnel (Pers 12)	Richard A. Gibboney & Associates, Inc. Dr. Johnnie Daniel
Director, Research & Analysis Div. Navy Recruiting Command (Code 20)	Wharton Applied Research Center Dr. Christopher Ritz
Department of Administrative Sciences Naval Postgraduate School (Dr. Elster)	Congressional Budget Office Mr. Daniel F. Huck
Military Assistant for Training and Personnel Technology Undersecretary of Defense Research and Engineering	
Personnel Analysis Division Headquarters USAF, AF/DPXA	
Technical Director U.S. Army Research Institute for the Behavioral and Social Sciences	